

What Is Claimed Is:

1. A system for monitoring a material quantity at a remote site comprising:  
a sensor that produces a first output signal corresponding to a material quantity;  
a data collector that receives said first output signal from said sensor and  
5 produces a second output signal that is representative of said material quantity;  
a remote telemetry unit that receives said second output signal and transmits a  
signal indicating material quantity; and  
a central computer disposed in data communication with said remote telemetry  
unit for receiving said signal indicating material quantity.

2. The system of claim 1 wherein said central computer includes means for  
storing said signal indicating material quantity and means for projecting a material  
usage rate for said material quantity based on said signal indicating material quantity.

3. The system of claim 1 wherein said data collector comprises means for  
transmitting said a second output signal that is representative of said material quantity  
to said central computer.

4. The system of claim 1 wherein said sensor is selected from one of  
20 ultrasonic level detectors and strain gauge detectors.

5. The system of claim 1 wherein said remote telemetry unit and said central  
computer communicate via modem at predetermined time intervals.

6. The system of claim 1 wherein said central computer automatically retrieves said second output signal from said remote telemetry unit at predetermined time intervals.

5 7. A system for monitoring material levels in storage vessels at a remote site comprising:

a level detector that produces a first output signal corresponding to a material level in one of said storage vessels, said level detector selected from one of ultrasonic and strain gauge level detectors;

a first computer that receives said first output signal from said level detector and produces at least one second output signal that is representative of said material quantity;

a remote telemetry unit for receiving said first output signal from said first computer and transmitting an output signal; and

15 a second computer in communication with said remote telemetry unit for receiving said output signal.

8. The system of claim 7 wherein said second computer includes means for storing said output signal and means for projecting a material usage rate for said material quantity based on said output.

9. The system of claim 7 wherein at least one of said first computer and said second computer include means for determining said material level and a projected usage rate for said material.

5 10. The system of claim 9 wherein said remote telemetry unit automatically transmits said output signal to said second computer at predetermined time intervals.

10 11. The system of claim 7 wherein said first computer comprises means for transmitting an output signal that is representative of said material level to said second computer.

12. A system for monitoring a material level in a storage vessel at a remote site comprising:

15 a level detector for producing an output signal corresponding to said material level, said level detector further comprising means for transmitting said output signal to a remote telemetry unit that transmits a signal indicating material quantity to a central computer disposed in data communication with said remote telemetry unit for receiving said signal indicating material quantity.

20 13. The system of claim 12 wherein said level detector comprises means for transmitting an output signal that is representative of said material level to a central computer disposed in data communication with said level detector for receiving said signal indicating material quantity.

14. A system for a transportation carrier to maintain a sufficient quantity of raw material at a remote site comprising:

a sensor that produces a first output signal corresponding to a material quantity;

a data collector that receives said first output signal from said sensor and

produces a second output signal that is representative of said material quantity;

a remote telemetry unit that receives said second output signal and transmits a signal indicating material quantity data; and

a central computer disposed in data communication with said remote telemetry unit for receiving said signal indicating material quantity, said central computer including means for storing said material quantity data and for projecting a usage rate for said material based on said second output signal.

15. The system of claim 14 wherein said central computer further comprises means for generating at least one of audible and visual alarms if said material quantity is below a predetermined level.

16. The system of claim 14 wherein said remote telemetry unit automatically transmits said second output signal to said central computer at predetermined time intervals.

17. A method for a transportation carrier to maintain sufficient quantities of raw materials at a remote manufacturing site comprising:

generating a first signal representative of an existing raw material quantity at a remote site;

transmitting a second signal corresponding to said first signal, from said remote site to at least one of a local computer and a central computer at predetermined time intervals;

determining said existing raw material quantity and projected material usage rate for said existing raw material quantity based on said transmitted signals;

ordering additional raw materials from a preselected vendor based on said existing material quantity and said projected material usage rate;

providing a transport vehicle to deliver said additional raw material from said preselected vendor to said manufacturing site; and

transporting said additional raw material from said preselected vendor to said manufacturing site,

whereby additional raw material is supplied to said manufacturing site before said existing raw material is depleted.

18. The method of claim 17 further comprising:

displaying at least one of said determined material quantity and said projected usage rate on said central computer.

19. The method of claim 17 further comprising:

producing at least one of an audible and a visual alarm, via said central computer, if said material level falls below a predetermined level.

20. The method of claim 17 wherein said generation of a first signal relative to an existing raw material quantity at a remote site using a detector comprises using one of an ultrasonic and a strain gauge detector to generate said first signal.

5 21. The method of claim 17 wherein said second signal is transmitted from said remote site to at least one of a local computer and a remote central computer.

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